

इंटरनेट

मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 8177 (1976): Pin Vices [PGD 6: Earth, Metal And Wood Working Hand Tools]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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Hand Tools Sectional Committee, EDC 12; Metal Workers Tools Subcommittee, EDC 12:2 [Ref: Doc: EDC 12 (2167)]



Indian Standard

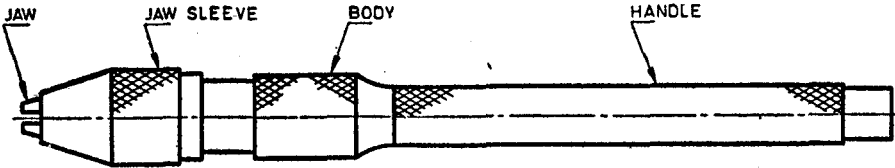
SPECIFICATION FOR

PIN VICES

(Reaffirmed 2003)

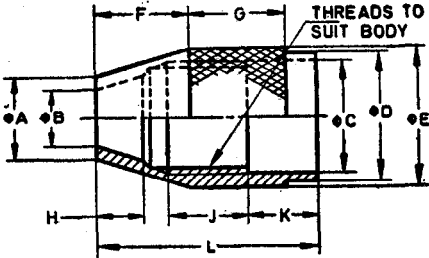
1. Scope — Covers dimensions and requirements of pin vices.

2. Nomenclature



3. Dimensions

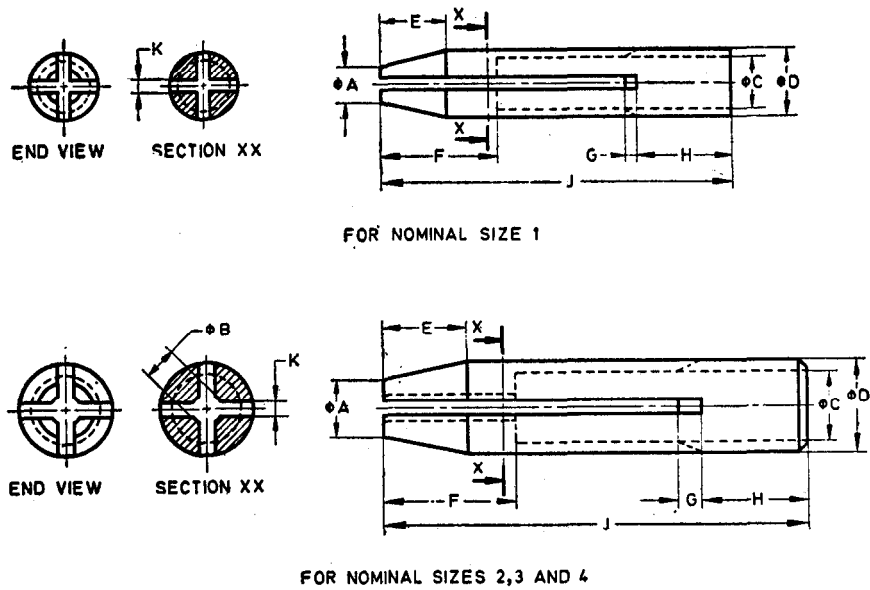
3.1 Jaw Sleeve



All dimensions in millimetres.

Nominal Size	A	B	C	D	E	F	G	H	J	K	L
1	4.3	3.0	6.5	7.2	8.1	6.0	5.6	3.2	5.6	4.0	13.5
2	5.7	4.0	8.5	8.9	9.7	6.4	6.5	3.2	5.6	4.8	15.2
3	8.0	5.6	10.5	11.1	12.0	7.1	7.2	3.2	6.4	5.6	16.9
4	10.0	8.0	12.5	14.0	15.0	7.5	7.9	3.2	7.9	6.4	18.7

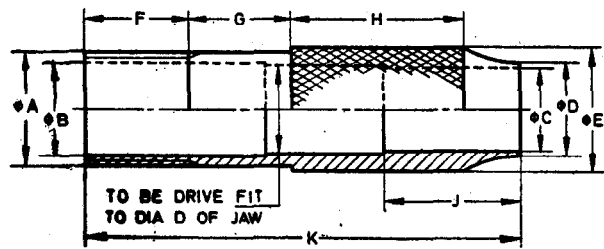
3.2 Jaw



All dimensions in millimetres.

Nominal Size	A	B	C	D	E	F	G	H	J	K
1	2.5	—	3.6	4.7	4.4	7.9	0.8	6.4	23.8	0.3
2	3.9	1.7	4.8	6.3	5.6	8.9	1.6	7.1	28.6	1.0
3	5.4	3.2	5.6	7.6	5.6	11.1	0.8	7.9	34.9	2.0
4	7.9	5.7	8.0	10.3	5.6	12.7	1.6	11.1	41.3	2.2

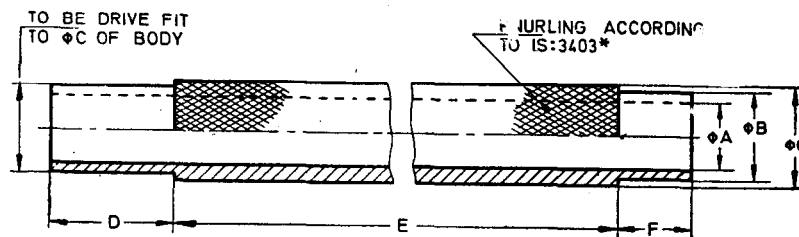
3.3 Body



All dimensions in millimetres.

Nominal Size	A	B	C	D	E	F	G	H	J	K
1	M 6	4.9	4.3	4.9	6.9	6.4	7.1	8.7	7.9	25.4
2	M 8	6.5	5.8	6.5	8.5	7.1	7.1	11.8	9.5	29.4
3	M10	7.8	5.9	6.8	10.1	7.5	9.5	13.1	8.7	35.0
4	M12	10.5	8.5	9.5	13.3	8.7	11.1	15.9	9.5	41.3

3.4 Handle



*IS : 3403-1966 Dimensions for knurling.

All dimensions in millimetres.

Nominal Size	A	B	C	D	E	F
1	2.8	4.3	4.9	7.1	38.1	4.0
2	4.5	5.8	6.7	8.0	46.0	4.8
3	4.5	5.9	6.8	8.0	46.0	4.8
4	7.0	8.5	9.5	8.0	46.0	8.0

3.5 The illustrations are diagrammatic only and are not intended to illustrate the details of design.

3.6 Tolerances on untoleranced dimensions shall be in accordance with the best prevalent practice.

4. **Material** — Suitable material used for various components shall be as given below and shall fulfill the requirements laid down in 5 and 6:

Components	Material
Jaw sleeve, body and handle	C15 of Schedule II of IS : 1570-1961 'Schedules for wrought steels for general engineering purposes'
Jaw	T50 of Schedule VI of IS:1570-1961 with a maximum sulphur and phosphorus content of 0.05 percent each

5. **Hardness** — Hardness for jaws shall be 400 to 500 HV ($\approx$ 41 to 49 HRC).

6. **Manufacture, Workmanship and Finish** — The threads in the jaw sleeves and the body shall be accurately cut. The jaw sleeve, body and handle shall be properly knurled. The jaws shall be properly machined and the segments accurately and uniformly cut. The handle and the jaw shall be drive fit to the body. The vices shall be free from cracks, seams, burrs and other defects. All sharp corners and edges except the knurled portions shall be removed. Threads shall be full and true. The jaw sleeve shall move freely and evenly in the body without any undue play or stiffness. The segments of the jaws shall meet evenly and simultaneously and the aperture in between shall be truly concentric at any point of operation. The pin vices shall be finished smooth and shall have suitable nickel chromium plating according to IS : 1068-1968 'Specification for electroplated coatings of nickel and chromium on iron and steel'.

7. Tests

7.1 **Performance Test** — The pin vices shall be capable of firmly gripping maximum and minimum size of mild steel wire as given below:

Nominal Size	Diameter of Steel Wire (mm)	
	Min	Max
1	0.2	1.0
2	0.8	1.6
3	1.2	3.2
4	2.8	5.6

The wires so held shall not slip out of the jaws on normal pull by hand and rotate in between the jaws when reasonably twisted with pliers at a point not exceeding 25 mm from the end of the jaw.

7.2 Adhesion Test — When rubbed with the back of the knife blade 10 to 15 times, the nickel plating shall not be peeled off and shall not show any sign of damage.

8. Marking — The pin vices shall be clearly and legibly stamped with the nominal size, manufacturer's name, initials and the recognized trade-mark. The year of manufacture shall also be marked legibly if required by the purchaser.

8.1 ISI Certification Marking — Details available with the Indian Standards Institution.

EXPLANATORY NOTE

This standard deals with the pin vices used by instrument makers for firmly holding small diameter pins, wires and small diameter rods which are being filed, threaded or ground. While preparing this standard assistance has been derived from Drawing No. IND/GS/2037 'Vices, pin, chuck type' issued by the Chief Inspectorate General Stores, Kanpur.